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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,278	03/17/2004	Xingen Dong	2802-107-026	4197
7590	11/30/2005			
Joseph J. Pophal PARKER - HANNIFIN CORPORATION 6035 Parkland Boulevard Cleveland, OH 44124-4141			EXAMINER LESLIE, MICHAEL S	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/802,278

Applicant(s)

DONG, XINGEN

Examiner

Michael Leslie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2 and 10 is/are allowed.
- 6) ☒ Claim(s) 3-9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/17/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 7, 8, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites that a case drain orifice is located in an upwardly directed horizontal surface regardless of the housing orientation, which is inaccurate because fourth side portion (70) and both end surfaces lack a case drain orifice.

Claims 7 and 8 recite a case drain orifice is located at the front most and rear most sections, respectively, of the housing. The terms "front-most" and "rear-most" in claims 7 and 8, respectively, are relative terms, which render the claims indefinite. The terms " front-most " and "rear-most" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The location of the case drain orifices is rendered indefinite because it is unclear whether the housing as a designated front and rear or if the front and rear are relative to the apparatus to which the pump is mounted.

Claim 14 recites the limitation "said plurality of intermediate sides" in line 2. There is insufficient antecedent basis for this limitation in the claim. It appears that claim 14 should depend from claim 13.

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Claim 15 recites the limitation "said at least some" in line 1. There is insufficient antecedent basis for this limitation in the claim. It appears that claim 15 should depend from claim 14.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by Schroeder et al (5845559).

Schroeder et al discloses a housing (13) for a variable displacement hydraulic pump having multiple external surfaces (not numbered), with at least one case drain orifice (not numbered, shown at least in Fig. 1) in at least two differing ones of the external surfaces.

Claims 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Schroeder et al (5845559).

Schroeder et al discloses a variable displacement hydraulic pump (11) having a housing (13) with a multiplicity of interconnected surfaces (not numbered), including opposed end surfaces and intermediate side surfaces, and at least one case drain orifice (not numbered, shown at least in Fig. 1) in each of a plurality of differing ones of the surfaces in a manner such that at least one of the orifices is located in the vicinity of the top surface of the housing in any spatial

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orientation of the housing (Figs. 2, 2A, & 3). Wherein the housing includes two end surfaces (not numbered) and a plurality of intermediate side surfaces (not numbered).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 6-9, as far as they are definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al (5845559) in view of Trimble (6332393).

Schroeder et al discloses a housing for a variable displacement hydraulic pump as described above with respect to claim 3, and further teaches that one of the case drain orifices is located at the upper or bottom or front or rear most section of the housing (Figs. 2, 2A, & 3) in any spatial orientation of the housing. Schroeder et al is silent about the scale of the pump.

Trimble discloses a light duty pump of axial piston type having case drains.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Schroeder et al by making it a light duty pump as taught by Trimble for the purpose of providing a pump that can be combined with motors and other remotely-located units to provide an infinitely variable flow rate and can be oriented in several different directions.

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Claims 12 and 14, as far as they are definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al (5845559) in view of Trimble (6332393).

Schroeder et al discloses a housing for a variable displacement hydraulic pump as described above with respect to claim 11, and further teaches that the case drain orifices are located within at least some of the housing side surfaces (Figs. 2, 2A, & 3). Schroeder et al is silent about the scale of the pump.

Trimble discloses a light duty pump of axial piston type having case drains.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Schroeder et al by making it a light duty pump as taught by Trimble for the purpose of providing a pump that can be combined with motors and other remotely-located units to provide an infinitely variable flow rate and can be oriented in several different directions.

#### ***Allowable Subject Matter***

Claims 1, 2, and 10 are allowed.

Claim 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 5794515, 4793774, 3908519, and 3361077 disclose pumps with case drains.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Leslie whose telephone number is (571) 272-4819. The examiner can normally be reached on M-F 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML  
November 18, 2005

  
Michael Leslie  
Patent Examiner  
AU 3745